

Certification Summary Information Report

Manufacturer	Mercedes Benz	Manufacturer Code	MBX
Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Certificate Number	TMBXV03.0HY4-026	CARB Executive Order #	--
Certificate Issue Date	07/17/2025	Certificate Revision Date	--
Certificate Effective Date	07/17/2025	Conditional Certificate	No
CSI Revision #	--	CSI Submission/Revision Date	07/16/2025 03:42:02 AM
Model Year	2026		

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Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP					
Test Group Information								
CSI Type	Update for Correction	Running Change Reference Number	--					
GHG Exempt Status	Not Exempt							
Drive Sources and Fuel(s)								
Drive Source #1:	Electric Motor							
	<table border="1"> <thead> <tr> <th>Fuel</th> <th>Basic Fuel Metering System</th> <th>Lean Burn Strategy Indicator</th> </tr> </thead> <tbody> <tr> <td>Electricity</td> <td>--</td> <td>--</td> </tr> </tbody> </table>	Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator	Electricity	--	--	
Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator						
Electricity	--	--						
Drive Source #2:	Combustion Engine							
	<table border="1"> <thead> <tr> <th>Fuel</th> <th>Basic Fuel Metering System</th> <th>Lean Burn Strategy Indicator</th> </tr> </thead> <tbody> <tr> <td>Gasoline</td> <td>Spark Ignition Direct fuel injection</td> <td>No</td> </tr> </tbody> </table>	Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator	Gasoline	Spark Ignition Direct fuel injection	No	
Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator						
Gasoline	Spark Ignition Direct fuel injection	No						
Hybrid Indicator	Yes							
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	Yes					
Multiple Fuel Combustion	--	Off-board Charge Capable Indicator	Yes					
Fuel Cell Indicator	No	EPA Vehicle Class	LDV					
Federal Clean Fuel Vehicle	No	Federal Clean Fuel Vehicle Standard	--					
Federal Clean Fuel Vehicle ILEV	No	California Partial Zero Emissions Vehicle Indicator	--					
Durability Group Name	TMBXHHGVNB11	Durability Group Equivalency Factor	1.0					
Reduced Fee Test Group	No	Certification Region Code(s)	FA, CA					
Complies with HD GHG 2b/3 regulations?	No							
Introduction into Commerce Date	07/25/2025	CAP2000 Conditional Certificate?	No					
Independent Commercial Importer?	No	Alternative Fuel Converter Certificate?	No					
SFTP Federal Composite Compliance Identifier	Tier 3	SFTP Tier 2 Composite CO Option	No					
SFTP LEV-III Composite Compliance Indicator	No							
OBD Compliance Type	CARB	OBD Demonstration Vehicle Test Group	TMBXV03.0HY4					
Test Group OBD Compliance Level	Partial - with deficiencies	Number of Test Group OBD Deficiencies	2					
OBD Deficiencies Comments	OBD approval reference number: E-25-208							
Mfr Test Group Comments	Test Group qualifies for Derived 5 - Cycle Approach: City Litmus Threshold: 18.5, City FE: 19.2 Pass / HWY Litmus Threshold: 23.1, HWY FE: 25.1 Pass / Sales: Federal = Nationwide (50 states): CA = CA+ 177 States							
Mfr Exhaust / Evap Standards Comments	--							

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Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP				
Evaporative/Refueling Family Information							
Evaporative Summary Information Type	New	Submission/Correction Date	02/28/2025 04:35:37 AM				
Integrated ORVR?	No	Fuel(s)	Gasoline				
Multiple Fuel Storage	--						
Bladder Fuel Tank?	No						
Fuel Tank Material	Metal	Fuel Tank Material Description	Steel				
Fill Pipe Seal Type	Liquid seal						
Air Intake System Vapor Storage Device?	No	Air Intake System Vapor Storage Device Description	--				
Fuel System Vapor Storage Canister?	Yes	Other Vapor Storage	--				
Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)	158	Number of Primary Canisters	1				
Number of Bleed Canisters	0	Bleed Canister Total Working Capacity (grams)	--				
Mfr Evaporative/Refueling Family Comments	PHEV (LDV/PC) w/ pressurized steel fuel tank / NIRCOS						
Leak Family Details							
Leak Family Indicator	Yes						
Canister Bleed Test Indicator	No	Applicability of Evaporative Canister Bleed Test	--				
Evaporative Canister Bleed Test Comments	--						
CARB Fuel Only (Rig) Test Indicator	No	Applicability of CARB Fuel Only (Rig) Test	--				
CARB Fuel Only (Rig) Test Comments	--						
Leak Family Name	Applicability of Leak Family Requirements	Leak Family Standard (inches)	Leak Family Description				
TMBXR0160LNP-LNP	50 State	0.02	--				
Models Covered by this Certificate							
Carline Manufacturer	Division	Carline	Certification Region Code(s)	Drive System	Trans - Type	- # of Gears	Trans - Lockup
Mercedes Benz	1 - Mercedes-Benz	304 - AMG E 53 HYBRID 4MATIC+	Federal	All Wheel Drive	Automatic	9	Yes
Mercedes Benz	1 - Mercedes-Benz	304 - AMG E 53 HYBRID 4MATIC+	California + CAA Section 177 states	All Wheel Drive	Automatic	9	Yes
Mercedes Benz	1 - Mercedes-Benz	305 - AMG E 53 HYBRID 4MATIC+ (station wagon)	California + CAA Section 177 states	All Wheel Drive	Automatic	9	Yes
Mercedes Benz	1 - Mercedes-Benz	305 - AMG E 53 HYBRID 4MATIC+ (station wagon)	Federal	All Wheel Drive	Automatic	9	Yes

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Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Engine Description			
Hybrid Type	IC Engine/Electric Motor	Hybrid Description	--
Engine Type	4-Stroke Spark Ignition	Mfr Engine Description	--
Engine Block Arrangement	Inline	Mfr Engine Block Arrangement Description	--
Camless Valvetrain Indicator	No	Oil Viscosity/Classification	0W20
Number of Cylinders/Rotors	6	Mechanically Variable Compression Ratio Indicator	N
After Treatment Device(s) (ATD)			
ATD Number	ATD Type	ATD Precious Metal	Substrate Material
1	Three-way catalyst	Palladium + Rhodium	Ceramic
2	Three-way catalyst	Palladium + Rhodium	Ceramic
Mfr After Treatment Device (ATD) Comments			
--			
Direct Ozone Reduction (DOR) Device	Not Equipped		
Mfr Emission Control Device Comments	--		
Engine Configuration Number 1			
Engine Displacement (liters)	3.0	Engine Rated Horsepower	443
Number of Inlet Valves Per Cylinder	2	Number of Exhaust Valves Per Cylinder	2
Air Aspiration Method	Turbocharged	Number of Air Aspiration Devices	1
Air Aspiration Device Configuration	Single	Charge Air Cooler Type	Liquid
Air Aspiration Drive Method(s)	Mechanical		
Cylinder Deactivation	No		
Cylinder Deactivation Description	--		
Variable Valve Timing	Yes		
Variable Valve Timing System Description	Allows timing of the intake / exhaust valves to be changed while the engine is in operation		
Variable Valve Lift?	No		
Variable Valve Lift System Description	--		
Number of Knock Sensors	3	Number of Air/Fuel Sensors	2
Air/Fuel Sensor # 1 Type	Heated oxygen	Air/Fuel Sensor # 1 Description	--
Air/Fuel Sensor # 2 Type	Heated oxygen	Air/Fuel Sensor # 2 Description	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	Yes	Cooled Exhaust Gas Recirculation	No
EGR Type	Variable Valve Timing Control	Exhaust Gas Recirculation Description if 'Other'	--
Closed Loop Air Injection System	No		
Air Injection Type	Not Applicable	Air Injection Type if 'Other'	--
Mfr Engine Configuration Comments	M256M-30DETC-P2/ 6-Cylinder Inline Engine Plug-In Hybrid / AMG E 53 HYBRID 4MATIC+ (PHEV) / COMBUSTION: 443 HP and 413 LB-FT / ELECTRIC : 161 HP and 354 LB-FT		

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Test Group		TMBXV03.0HY4				Evaporative/Refueling Family		TMBXR0160LNP		
Official Test Numbers										
Test Group Fuel	FTP	US06	SC03	Cold CO	Highway	EPA City Litmus Value	EPA City Litmus Threshold	EPA Highway Litmus Value	EPA Highway Litmus Threshold	CREE Weighting Factor
Gasoline	TMBX10090814	TMBX10090816	TMBX10090818	TMBX10090817	TMBX10090815	22.3	228.2	32.8	286.1	--
Electricity	TMBX10090814	TMBX10090816	TMBX10090818	TMBX10090817	TMBX10090815	--	--	--	--	--
SFTP LEV-III Official Test Numbers										
Test Group Fuel	FTP	US06	SC03							
Electricity	TMBX10090814	TMBX10090816	TMBX10090818							
Gasoline	TMBX10090814	TMBX10090816	TMBX10090818							
Official Charge Depleting Test Numbers										
Test Group Fuel	UDDS	Highway								
Electricity	TMBX10090951	TMBX10090952								
Gasoline	TMBX10090951	TMBX10090952								
Hybrid Electric Vehicle And Fuel Cell Information										
Rechargeable Energy Storage System	Battery(s)	Rechargeable Energy Storage System, if Other	--							
Battery Type	Lithium Ion	Number of Battery Packs	1							
Total Voltage of Battery Packs	388	Battery Energy Capacity	74							
Battery Specific Energy	119.1	Battery Charger Type	Both							
Number of Capacitors	--	Capacitor Rating (In Farads)	--							
Mfr Capacitor Comments	--									
Hydraulic System Description	--									
Regenerative Braking Type	Electrical Regen Brake									
Regenerative Braking Source	Both	Driver Controlled Regenerative Braking	No							
Mfr Regenerative Braking Description	--									
Drive Motor(s)/Generator(s)	1									
Motor/Generator Type 1	permanent magnet synchronous	Rated Motor/Generator Power	120							
Mfr Fuel Cell Description	--									
Fuel Cell On-Board H2 Storage Capacity (kg)	--	Usable H2 Fill Capacity (kg)	--							
Mfr Hybrid Electric/ Electric Vehicle Comments	--									

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Test Group		TMBXV03.0HY4			Evaporative/Refueling Family			TMBXR0160LNP
Dynamometer Coefficients:								
		Target Coefficients			Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)		
City/Highway/Evap	65.19	0.1628	0.02206	3.97	0.19182	0.018829	17.1	
Cold CO	71.71	0.1791	0.02427	-3.19	-0.0869	0.02187	N/A	
US06	65.19	0.1628	0.02206	3.97	0.19182	0.018829	N/A	
Emission Control Device Comments	--							
Manufacturer Test Vehicle Comments	265/35 R21 Front, 295/30 R21 Rear							

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Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Test #	TMBX10090814	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	05/06/2025	Fuel	Gasoline
Fuel Batch ID	U26R04	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	3953 Research Park Drive		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4243	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	497.7408156	--
FE BAG 1 (Bag 1 Fuel Economy)	17.5538477	17.5538477
CO2 BAG 2 (Bag 2 Carbon Dioxide)	288.1496247	--
FE BAG 2 (Bag 2 Fuel Economy)	30.3496818	30.3496818
CO2 BAG 3 (Bag 3 Carbon Dioxide)	389.9502644	--
FE BAG 3 (Bag 3 Fuel Economy)	22.4115384	22.4115384
CO2 BAG 4 (Bag 4 Carbon Dioxide)	293.0638034	--
FE BAG 4 (Bag 4 Fuel Economy)	29.8335924	29.8335924
METHANE (CH4 - Methane)	0.0013732	--
CO (Carbon Monoxide)	0.1467323	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	2.2066	--
DT-EER (Drive Trace Energy Economy Rating)	0.4073	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	3.4943	--
MFR FE (Manufacturer Fuel Economy)	24.2112549	24.2112549
NOX (Nitrogen Oxide)	0.0035654	--
N2O (Nitrous Oxide)	0.0001337	--
HC-NM (Non-methane Hydrocarbon)	0.004515	--
NMOG (Non-methane organic gases)	0.0049709	--
PM (Particulate Matter)	0.0006817	--
HC-TOTAL (Total Hydrocarbon)	0.0057796	--

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Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
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Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	999	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	361.0189761	--

Manufacturer Test Comments Charge sustaining operation, default drive mode.

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 30	CREE	999	--	--	--	--	1.26	1259	--	--
Fed	120,000 miles	Federal Tier 3 Bin 30	METHANE	0.0014	--	--	--	0.002	--	0.003	0.030	Pass
Fed	120,000 miles	Federal Tier 3 Bin 30	N2O	0.0001	--	--	--	0.0007	--	0.001	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CO	0.15	--	--	--	0.11	--	0.3	1.0	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CO-COMP	0.26	--	--	--	--	--	0.3	4.2	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.005	--	1.1	--	0.0034	--	0.008	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0086	--	--	--	--	--	0.014	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX-COMP	0.0133	--	--	--	--	--	0.013	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0036	--	--	--	0.0024	--	0.006	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	PM	0.0007	--	--	--	0	--	0.001	0.003	Pass
CA	120,000 miles	California LEV-IV SULEV30	CREE	999	--	--	--	--	1.26	1259	--	--
CA	150,000 miles	California LEV-IV SULEV30	CO	0.15	--	--	--	0.11	--	0.3	1.0	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.005	--	1.1	--	0.0034	--	0.008	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0086	--	--	--	--	--	0.014	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0036	--	--	--	0.0024	--	0.006	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	PM	0.0007	--	--	--	0	--	0.001	0.003	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.

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Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Test #	TMBX10090817	Test Procedure	11 - Cold CO
Exhaust Test # for this Evap Test	--	Test Fuel Type	29 - Cold CO E10 Premium Gasoline (Tier 3)
Test Date	04/25/2025	Fuel	Gasoline
Fuel Batch ID	U25C02	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	3953 Research Park Drive		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3935	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	691.5139096	--
FE BAG 1 (Bag 1 Fuel Economy)	12.559805	12.559805
CO2 BAG 2 (Bag 2 Carbon Dioxide)	359.658825	--
FE BAG 2 (Bag 2 Fuel Economy)	24.1804343	24.1804343
CO2 BAG 3 (Bag 3 Carbon Dioxide)	431.8981372	--
FE BAG 3 (Bag 3 Fuel Economy)	20.1246931	20.1246931
CO2 BAG 4 (Bag 4 Carbon Dioxide)	9999.9999999	--
FE BAG 4 (Bag 4 Fuel Economy)	9999.9999999	9999.9999999
METHANE (CH4 - Methane)	0.0032471	--
CO (Carbon Monoxide)	0.1672702	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.4087	--
DT-EER (Drive Trace Energy Economy Rating)	-0.7914	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.0263	--
MFR FE (Manufacturer Fuel Economy)	19.3865003	19.3865003
NOX (Nitrogen Oxide)	0.0073459	--
N2O (Nitrous Oxide)	0.0003175	--
HC-NM (Non-methane Hydrocarbon)	0.012637	--
NMOG (Non-methane organic gases)	0.0131425	--
PM (Particulate Matter)	9999.9999999	--
HC-TOTAL (Total Hydrocarbon)	0.0152491	--

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Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
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Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	999	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	448.3405398	--

Manufacturer Test Comments Charge sustaining operation, default drive mode.

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	50,000 miles	Federal Tier 3 Bin 30	CO	0.17	--	--	--	0.11	--	0.3	10.0	Pass
Fed	120,000 miles	Federal Tier 3 Bin 30	HC-NM	0.0126	--	--	--	0.0031	--	0.016	0.100	Pass
CA	50,000 miles	California LEV-IV SULEV30	CO	0.17	--	--	--	0.11	--	0.3	10.0	Pass

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Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Test #	TMBX10090880	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	05/09/2025	Fuel	Gasoline
Fuel Batch ID	U26R04	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	3953 Research Park Drive		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4316	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	694.1577084	--
FE BAG 1 (Bag 1 Fuel Economy)	12.5872116	12.5872116
CO2 BAG 2 (Bag 2 Carbon Dioxide)	549.2574569	--
FE BAG 2 (Bag 2 Fuel Economy)	15.9245123	15.9245123
CO2 BAG 3 (Bag 3 Carbon Dioxide)	449.5021768	--
FE BAG 3 (Bag 3 Fuel Economy)	19.4539887	19.4539887
CO2 BAG 4 (Bag 4 Carbon Dioxide)	567.8352406	--
FE BAG 4 (Bag 4 Fuel Economy)	15.4035356	15.4035356
METHANE (CH4 - Methane)	0.0014619	--
CO (Carbon Monoxide)	0.0992325	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.7582	--
DT-EER (Drive Trace Energy Economy Rating)	-0.4002	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.3225	--
MFR FE (Manufacturer Fuel Economy)	15.6889332	15.6889332
NOX (Nitrogen Oxide)	0.0046376	--
N2O (Nitrous Oxide)	0.0001825	--
HC-NM (Non-methane Hydrocarbon)	0.00783	--
NMOG (Non-methane organic gases)	0.0086207	--
PM (Particulate Matter)	0.0009189	--
HC-TOTAL (Total Hydrocarbon)	0.0091762	--

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Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	999	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	557.3257359	--

Manufacturer Test Comments Drive Mode Sport+, Charge Increasing Operation

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 30	CREE	999	--	--	--	--	1.26	1259	--	--
Fed	120,000 miles	Federal Tier 3 Bin 30	METHANE	0.0015	--	--	--	0.002	--	0.004	0.030	Pass
Fed	120,000 miles	Federal Tier 3 Bin 30	N2O	0.0002	--	--	--	0.0007	--	0.001	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CO	0.1	--	--	--	0.11	--	0.2	1.0	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0086	--	1.1	--	0.0034	--	0.012	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0132	--	--	--	--	--	0.019	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0046	--	--	--	0.0024	--	0.007	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	PM	0.0009	--	--	--	0	--	0.001	0.003	Pass
CA	120,000 miles	California LEV-IV SULEV30	CREE	999	--	--	--	--	1.26	1259	--	--
CA	150,000 miles	California LEV-IV SULEV30	CO	0.1	--	--	--	0.11	--	0.2	1.0	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0086	--	1.1	--	0.0034	--	0.012	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0132	--	--	--	--	--	0.019	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0046	--	--	--	0.0024	--	0.007	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	PM	0.0009	--	--	--	0	--	0.001	0.003	Pass

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Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Test #	TMBX10090884	Test Procedure	11 - Cold CO
Exhaust Test # for this Evap Test	--	Test Fuel Type	29 - Cold CO E10 Premium Gasoline (Tier 3)
Test Date	04/24/2025	Fuel	Gasoline
Fuel Batch ID	U25C02	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	3953 Research Park Drive		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3909	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	755.7632625	--
FE BAG 1 (Bag 1 Fuel Economy)	11.4884274	11.4884274
CO2 BAG 2 (Bag 2 Carbon Dioxide)	532.4320793	--
FE BAG 2 (Bag 2 Fuel Economy)	16.3355242	16.3355242
CO2 BAG 3 (Bag 3 Carbon Dioxide)	447.0076395	--
FE BAG 3 (Bag 3 Fuel Economy)	19.4478708	19.4478708
CO2 BAG 4 (Bag 4 Carbon Dioxide)	9999.9999999	--
FE BAG 4 (Bag 4 Fuel Economy)	9999.9999999	9999.9999999
METHANE (CH4 - Methane)	0.0035508	--
CO (Carbon Monoxide)	0.1826579	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.1242	--
DT-EER (Drive Trace Energy Economy Rating)	-0.9952	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.4427	--
MFR FE (Manufacturer Fuel Economy)	15.6556194	15.6556194
NOX (Nitrogen Oxide)	0.0049138	--
N2O (Nitrous Oxide)	0.0004863	--
HC-NM (Non-methane Hydrocarbon)	0.0153288	--
NMOG (Non-methane organic gases)	0.015942	--
PM (Particulate Matter)	9999.9999999	--
HC-TOTAL (Total Hydrocarbon)	0.0182535	--

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
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Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	999	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	555.2246591	--

Manufacturer Test Comments Drive Mode Sport, Charge Increasing Operation

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	50,000 miles	Federal Tier 3 Bin 30	CO	0.18	--	--	--	0.11	--	0.3	10.0	Pass
Fed	120,000 miles	Federal Tier 3 Bin 30	HC-NM	0.0153	--	--	--	0.0031	--	0.018	0.100	Pass
CA	50,000 miles	California LEV-IV SULEV30	CO	0.18	--	--	--	0.11	--	0.3	10.0	Pass

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Test #	TMBX10090961	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline
Test Date	05/13/2025	Fuel	Gasoline
Fuel Batch ID	U26100	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	3953 Research Park Drive		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4441	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	496.9250379	--
FE BAG 1 (Bag 1 Fuel Economy)	17.8283464	17.8283464
CO2 BAG 2 (Bag 2 Carbon Dioxide)	311.956373	--
FE BAG 2 (Bag 2 Fuel Economy)	28.4342726	28.4342726
CO2 BAG 3 (Bag 3 Carbon Dioxide)	398.5491532	--
FE BAG 3 (Bag 3 Fuel Economy)	22.2426326	22.2426326
CO2 BAG 4 (Bag 4 Carbon Dioxide)	276.3634296	--
FE BAG 4 (Bag 4 Fuel Economy)	32.09752	32.09752
METHANE (CH4 - Methane)	0.0012267	--
CO (Carbon Monoxide)	0.1168045	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	2.2682	--
DT-EER (Drive Trace Energy Economy Rating)	0.1531	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	3.7214	--
MFR FE (Manufacturer Fuel Economy)	24.3820166	24.3820166
NOX (Nitrogen Oxide)	0.0046997	--
N2O (Nitrous Oxide)	0.000243	--
HC-NM (Non-methane Hydrocarbon)	0.0075281	--
NMOG (Non-methane organic gases)	0.0078292	--
HC-TOTAL (Total Hydrocarbon)	0.0083157	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	363.821584	364

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
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Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	363.6116748	--

Manufacturer Test Comments GHG E0 charge sustaining operation, drive mode default

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 30	CREE	364	--	--	--	--	1.26	459	--	--
Fed	120,000 miles	Federal Tier 3 Bin 30	METHANE	0.0012	--	--	--	0.002	--	0.003	0.030	Pass
Fed	120,000 miles	Federal Tier 3 Bin 30	N2O	0.0002	--	--	--	0.0007	--	0.001	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CO	0.12	--	--	--	0.11	--	0.2	1.0	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0078	--	1.1	--	0.0034	--	0.011	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0125	--	--	--	--	--	0.018	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0047	--	--	--	0.0024	--	0.007	99.999	Pass
CA	120,000 miles	California LEV-IV SULEV30	CREE	364	--	--	--	--	1.26	459	--	--
CA	150,000 miles	California LEV-IV SULEV30	CO	0.12	--	--	--	0.11	--	0.2	1.0	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0078	--	1.1	--	0.0034	--	0.011	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0125	--	--	--	--	--	0.018	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0047	--	--	--	0.0024	--	0.007	99.999	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Test #	TMBX10090815	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	05/06/2025	Fuel	Gasoline
Fuel Batch ID	U26R04	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	3953 Research Park Drive		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4258	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.0001637	--
CO (Carbon Monoxide)	0.0232454	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	6.0948	--
DT-EER (Drive Trace Energy Economy Rating)	0.2359	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	7.7166	--
MFR FE (Manufacturer Fuel Economy)	34.1969282	34.1969282
NOX (Nitrogen Oxide)	0.0010516	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0.0000172	--
NMOG (Non-methane organic gases)	0.0000177	--
PM (Particulate Matter)	0.000159	--
HC-TOTAL (Total Hydrocarbon)	0.000168	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	999	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	255.7383346	--

Manufacturer Test Comments

Charge sustaining operation, default drive mode.

Certification Summary Information Report

Test Group		TMBXV03.0HY4				Evaporative/Refueling Family				TMBXR0160LNP		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 30	CREE	999	--	--	--	--	1.26	1259	--	--
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0	--	1.03	--	0.0034	--	0.003	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0011	--	--	--	--	--	0.007	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0011	--	--	--	0.0024	--	0.004	99.999	Pass
CA	120,000 miles	California LEV-IV SULEV30	CREE	999	--	--	--	--	1.26	1259	--	--
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0	--	1.03	--	0.0034	--	0.003	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0011	--	--	--	--	--	0.007	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0011	--	--	--	0.0024	--	0.004	99.999	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Test #	TMBX10090881	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	05/09/2025	Fuel	Gasoline
Fuel Batch ID	U26R04	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	3953 Research Park Drive		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4338	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.000147	--
CO (Carbon Monoxide)	0.0214562	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	5.3384	--
DT-EER (Drive Trace Energy Economy Rating)	-0.6098	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	6.9321	--
MFR FE (Manufacturer Fuel Economy)	27.9202199	27.9202199
NOX (Nitrogen Oxide)	0.0003283	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--
PM (Particulate Matter)	0.0001959	--
HC-TOTAL (Total Hydrocarbon)	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	999	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	313.2421893	--

Manufacturer Test Comments

Drive Mode Sport, Charge Increasing Operation

Certification Summary Information Report

Test Group		TMBXV03.0HY4				Evaporative/Refueling Family				TMBXR0160LNP		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 30	CREE	999	--	--	--	--	1.26	1259	--	--
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0	--	1.03	--	0.0034	--	0.003	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0003	--	--	--	--	--	0.006	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0003	--	--	--	0.0024	--	0.003	99.999	Pass
CA	120,000 miles	California LEV-IV SULEV30	CREE	999	--	--	--	--	1.26	1259	--	--
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0	--	1.03	--	0.0034	--	0.003	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0003	--	--	--	--	--	0.006	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0003	--	--	--	0.0024	--	0.003	99.999	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Test #	TMBX10090962	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline
Test Date	05/13/2025	Fuel	Gasoline
Fuel Batch ID	U26100	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	3953 Research Park Drive		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4454	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.0002855	--
CO (Carbon Monoxide)	0.0427212	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.0521	--
DT-EER (Drive Trace Energy Economy Rating)	-1.5345	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.1555	--
MFR FE (Manufacturer Fuel Economy)	35.7743767	35.7743767
NOX (Nitrogen Oxide)	0.0001808	--
N2O (Nitrous Oxide)	0.0000344	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--
HC-TOTAL (Total Hydrocarbon)	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	247.9625146	248

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	247.8953996	--

Manufacturer Test Comments

GHG E0 charge sustaining operation, drive mode default

Certification Summary Information Report

Test Group		TMBXV03.0HY4				Evaporative/Refueling Family				TMBXR0160LNP		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 30	CREE	248	--	--	--	--	1.26	312	--	--
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0	--	1.03	--	0.0034	--	0.003	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0002	--	--	--	--	--	0.006	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0002	--	--	--	0.0024	--	0.003	99.999	Pass
CA	120,000 miles	California LEV-IV SULEV30	CREE	248	--	--	--	--	1.26	312	--	--
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0	--	1.03	--	0.0034	--	0.003	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0002	--	--	--	--	--	0.006	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0002	--	--	--	0.0024	--	0.003	99.999	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Test #	TMBX10090816	Test Procedure	90 - US06
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	05/06/2025	Fuel	Gasoline
Fuel Batch ID	U26R04	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	3953 Research Park Drive		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4278	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	518.5367977	--
FE BAG 1 (Bag 1 Fuel Economy)	16.850699	16.850699
CO2 BAG 2 (Bag 2 Carbon Dioxide)	321.6696596	--
FE BAG 2 (Bag 2 Fuel Economy)	27.17605	27.17605
CO (Carbon Monoxide)	0.1609642	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	3.2334	--
DT-EER (Drive Trace Energy Economy Rating)	-0.3461	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	6.2937	--
MFR FE (Manufacturer Fuel Economy)	23.9185041	23.9185041
NOX (Nitrogen Oxide)	0.0007543	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0.0015931	--
NMOG (Non-methane organic gases)	0.0016409	--
PM (Particulate Matter)	0.0004177	--
HC-NM+NOX (SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03)	0.0023474	--
HC-TOTAL (Total Hydrocarbon)	0.0032103	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	365.4261882	--

Manufacturer Test Comments

Charge sustaining operation, default drive mode.

Certification Summary Information Report

Test Group		TMBXV03.0HY4			Evaporative/Refueling Family					TMBXR0160LNP		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 30	PM	0.0004	--	--	--	0	--	0	0.006	Pass
CA	150,000 miles	California LEV-IV SULEV30	CO	0.16	--	--	--	0.11	--	0.3	9.6	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0016	--	1.03	--	0.0034	--	0.005	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0024	--	--	--	--	--	0.008	0.036	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0008	--	--	--	0.0024	--	0.003	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	PM	0.0004	--	--	--	0	--	0	0.006	Pass

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Test #	TMBX10090882	Test Procedure	90 - US06
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	05/09/2025	Fuel	Gasoline
Fuel Batch ID	U26R04	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	3953 Research Park Drive		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4366	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	712.0881354	--
FE BAG 1 (Bag 1 Fuel Economy)	12.2797614	12.2797614
CO2 BAG 2 (Bag 2 Carbon Dioxide)	353.812033	--
FE BAG 2 (Bag 2 Fuel Economy)	24.7030215	24.7030215
CO (Carbon Monoxide)	0.1411288	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.6484	--
DT-EER (Drive Trace Energy Economy Rating)	-0.8073	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	3.568	--
MFR FE (Manufacturer Fuel Economy)	20.1733933	20.1733933
NOX (Nitrogen Oxide)	0.0006042	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0.0050057	--
NMOG (Non-methane organic gases)	0.0051559	--
PM (Particulate Matter)	0.0009357	--
HC-NM+NOX (SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03)	0.0056099	--
HC-TOTAL (Total Hydrocarbon)	0.0090414	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	433.3282651	--

Manufacturer Test Comments

Drive Mode Sport, Charge Increasing Operation

Certification Summary Information Report

Test Group		TMBXV03.0HY4				Evaporative/Refueling Family				TMBXR0160LNP		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 30	PM	0.0009	--	--	--	0	--	0.001	0.006	Pass
CA	150,000 miles	California LEV-IV SULEV30	CO	0.14	--	--	--	0.11	--	0.2	9.6	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0052	--	1.03	--	0.0034	--	0.009	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0058	--	--	--	--	--	0.012	0.036	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0006	--	--	--	0.0024	--	0.003	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	PM	0.0009	--	--	--	0	--	0.001	0.006	Pass

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Test #	TMBX10090960	Test Procedure	50 - High-Power Cold-Start (HPCS)
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	04/29/2025	Fuel	Gasoline
Fuel Batch ID	U26R02	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	3953 Research Park Drive		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3983	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
ACT-DISTANCE (Actual Distance Driven (miles))	8	--
AS-VOLT (Average System Voltage)	380.275	--
METHANE (CH4 - Methane)	0.0019996	--
CO (Carbon Monoxide)	0.1582789	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.839	--
DT-EER (Drive Trace Energy Economy Rating)	2.17	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.367	--
AMP-HRS (Integrated Amp-hours)	21.383	--
MFR FE (Manufacturer Fuel Economy)	24.8	24.8
NOX (Nitrogen Oxide)	0.0042072	--
N2O (Nitrous Oxide)	0.0002816	--
HC-NM (Non-methane Hydrocarbon)	0.0084141	--
NMOG (Non-methane organic gases)	0.0086666	--
HC-TOTAL (Total Hydrocarbon)	0.0102649	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	347.6302	--

Manufacturer Test Comments

E10 Charge Depleting US06, Drive Mode Default from Full Charge. High-power cold start emissions standards apply to the cold-start cycle (only data included).

Certification Summary Information Report

Test Group		TMBXV03.0HY4				Evaporative/Refueling Family				TMBXR0160LNP		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0087	--	1.03	--	0.0034	--	0.012	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0129	--	--	--	--	--	0.019	0.150	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0042	--	--	--	0.0024	--	0.007	99.999	Pass

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Test #	TMBX10090818	Test Procedure	95 - SC03
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	05/06/2025	Fuel	Gasoline
Fuel Batch ID	U26R04	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	3953 Research Park Drive		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4294	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO (Carbon Monoxide)	0.1421283	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.0815	--
DT-EER (Drive Trace Energy Economy Rating)	-0.5058	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.2055	--
MFR FE (Manufacturer Fuel Economy)	21.7627286	21.7627286
NOX (Nitrogen Oxide)	0.0102362	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--
PM (Particulate Matter)	0.0000768	--
HC-NM+NOX (SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03)	0.0102362	--
HC-TOTAL (Total Hydrocarbon)	0.0005695	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	401.6883133	--

Manufacturer Test Comments

Charge sustaining operation, default drive mode.

Certification Summary Information Report

Test Group		TMBXV03.0HY4				Evaporative/Refueling Family				TMBXR0160LNP		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
CA	150,000 miles	California LEV-IV SULEV30	CO	0.14	--	--	--	0.11	--	0.2	1.0	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0	--	1.03	--	0.0034	--	0.003	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0102	--	--	--	--	--	0.016	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0102	--	--	--	0.0024	--	0.013	99.999	Pass

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Test #	TMBX10090883	Test Procedure	95 - SC03
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	05/09/2025	Fuel	Gasoline
Fuel Batch ID	U26R04	Fuel Calibration Number	1
Vehicle Class	LDV/Passenger Car	DF Type	EPA Assigned
Verify Test Lab ID	3953 Research Park Drive		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4389	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO (Carbon Monoxide)	0.0932579	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.5012	--
DT-EER (Drive Trace Energy Economy Rating)	-0.4534	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.4067	--
MFR FE (Manufacturer Fuel Economy)	10.8755055	10.8755055
NOX (Nitrogen Oxide)	0.0122427	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0.0009305	--
NMOG (Non-methane organic gases)	0.0009584	--
PM (Particulate Matter)	0.0021414	--
HC-NM+NOX (SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03)	0.0131732	--
HC-TOTAL (Total Hydrocarbon)	0.0017327	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	804.107991	--

Manufacturer Test Comments Drive Mode Sport+, Charge Increasing Operation

Certification Summary Information Report

Test Group		TMBXV03.0HY4				Evaporative/Refueling Family				TMBXR0160LNP		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
CA	150,000 miles	California LEV-IV SULEV30	CO	0.09	--	--	--	0.11	--	0.2	1.0	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.001	--	1.03	--	0.0034	--	0.004	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0132	--	--	--	--	--	0.019	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0122	--	--	--	0.0024	--	0.015	99.999	Pass

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Test #	TMBX10090951	Test Procedure	81 - Charge Depleting UDDS
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	05/01/2025	Fuel	N/A
Fuel Batch ID	U26R04	Fuel Calibration Number	1
Vehicle Class	N/A	DF Type	EPA Assigned
Verify Test Lab ID	3953 Research Park Drive		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4038	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
PHEV/EV Charge Depleting Test Information			
Recharge Event Voltage	240	Recharge Event Energy (kiloWatt-hours)	25.2574
Charge Depleting Range (Calculated miles)	52.15	Charge Depleting Range (Actual miles)	51.67
Charge Depleting Range Highway (Calculated miles)	--	Derived 5-Cycle Coefficient Model Year	2017
All Electric Range Unadjusted (miles)	51.543	Equivalent All Electric Range (miles)	51.064
Number of Charge Depleting Bags/Phases Conducted	8	Transition Bag/Phase Number	7
Charge Depleting Bag/Phase #1			

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
	Test Result/Emission Name	Unrounded Test Result	
	Actual Distance Driven (miles)	7.452	
	Average System Voltage	416.03	
	CH4 - Methane	0	
	Carbon Monoxide	0	
	Carbon dioxide	0	
	Carbon-Related Exhaust Emissions	999.99	
	Drive Trace Absolute Speed Change Rating	2.558	
	Drive Trace Energy Economy Rating	0.435	
	Drive Trace Inertia Work Ratio Rating	4.119	
	Integrated Amp-hours	14.94	
	Integrated DC KW-HRS	6.2969	
	Manufacturer Fuel Economy	0	
	Nitrogen Oxide	0	
	Nitrous Oxide	0	
	Non-methane Hydrocarbon	0	
	Non-methane organic gases	0	
	Non-methane organic gases plus Nitrogen Oxides	999.999	
	Optional Carbon-Related Exhaust Emissions	999.99	
	Particulate Matter	0	
	Total Hydrocarbon	0	

Charge Depleting Bag/Phase #3

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
	Test Result/Emission Name	Unrounded Test Result	
	Actual Distance Driven (miles)	7.452	
	Average System Voltage	405.6	
	CH4 - Methane	0	
	Carbon Monoxide	0	
	Carbon dioxide	0	
	Carbon-Related Exhaust Emissions	999.99	
	Drive Trace Absolute Speed Change Rating	2.24	
	Drive Trace Energy Economy Rating	0.398	
	Drive Trace Inertia Work Ratio Rating	3.635	
	Integrated Amp-hours	22.5036	
	Integrated DC KW-HRS	9.3647	
	Manufacturer Fuel Economy	0	
	Nitrogen Oxide	0	
	Nitrous Oxide	0	
	Non-methane Hydrocarbon	0	
	Non-methane organic gases	0	
	Non-methane organic gases plus Nitrogen Oxides	999.999	
	Optional Carbon-Related Exhaust Emissions	999.99	
	Particulate Matter	0	
	Total Hydrocarbon	0	

Charge Depleting Bag/Phase #4

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
	Test Result/Emission Name		Unrounded Test Result
	Actual Distance Driven (miles)		7.466
	Average System Voltage		395.98
	CH4 - Methane		0
	Carbon Monoxide		0
	Carbon dioxide		0
	Carbon-Related Exhaust Emissions		999.99
	Drive Trace Absolute Speed Change Rating		3.495
	Drive Trace Energy Economy Rating		1.078
	Drive Trace Inertia Work Ratio Rating		5.282
	Integrated Amp-hours		30.2545
	Integrated DC KW-HRS		12.4339
	Manufacturer Fuel Economy		0
	Nitrogen Oxide		0
	Nitrous Oxide		0
	Non-methane Hydrocarbon		0
	Non-methane organic gases		0
	Non-methane organic gases plus Nitrogen Oxides		999.999
	Optional Carbon-Related Exhaust Emissions		999.99
	Particulate Matter		0
	Total Hydrocarbon		0

Charge Depleting Bag/Phase #5

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
	Test Result/Emission Name	Unrounded Test Result	
	Actual Distance Driven (miles)	7.459	
	Average System Voltage	390.3	
	CH4 - Methane	0	
	Carbon Monoxide	0	
	Carbon dioxide	0	
	Carbon-Related Exhaust Emissions	999.99	
	Drive Trace Absolute Speed Change Rating	3.25	
	Drive Trace Energy Economy Rating	1.12	
	Drive Trace Inertia Work Ratio Rating	5.093	
	Integrated Amp-hours	38.0618	
	Integrated DC KW-HRS	15.4811	
	Manufacturer Fuel Economy	0	
	Nitrogen Oxide	0	
	Nitrous Oxide	0	
	Non-methane Hydrocarbon	0	
	Non-methane organic gases	0	
	Non-methane organic gases plus Nitrogen Oxides	999.999	
	Optional Carbon-Related Exhaust Emissions	999.99	
	Particulate Matter	0	
	Total Hydrocarbon	0	

Charge Depleting Bag/Phase #6

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
	Test Result/Emission Name	Unrounded Test Result	
	Actual Distance Driven (miles)	7.456	
	Average System Voltage	381.26	
	CH4 - Methane	0.0036553	
	Carbon Monoxide	0.1019342	
	Carbon dioxide	52.3048	
	Carbon-Related Exhaust Emissions	999.99	
	Drive Trace Absolute Speed Change Rating	3.146	
	Drive Trace Energy Economy Rating	0.9	
	Drive Trace Inertia Work Ratio Rating	5.089	
	Integrated Amp-hours	53.2536	
	Integrated DC KW-HRS	21.3126	
	Manufacturer Fuel Economy	164.26	
	Nitrogen Oxide	0.0030244	
	Nitrous Oxide	0.0008047	
	Non-methane Hydrocarbon	0.0190938	
	Non-methane organic gases	0.020999	
	Non-methane organic gases plus Nitrogen Oxides	999.999	
	Optional Carbon-Related Exhaust Emissions	999.99	
	Particulate Matter	0.0005308	
	Total Hydrocarbon	0.0224772	

Charge Depleting Bag/Phase #8

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Test Result/Emission Name	Unrounded Test Result		
Actual Distance Driven (miles)	7.452		
Average System Voltage	380.47		
CH4 - Methane	0.0041722		
Carbon Monoxide	0.1431977		
Carbon dioxide	295.4753		
Carbon-Related Exhaust Emissions	999.99		
Drive Trace Absolute Speed Change Rating	2.514		
Drive Trace Energy Economy Rating	0.384		
Drive Trace Inertia Work Ratio Rating	4.199		
Integrated Amp-hours	54.2744		
Integrated DC KW-HRS	21.701		
Manufacturer Fuel Economy	29.18		
Nitrogen Oxide	0.0017511		
Nitrous Oxide	0		
Non-methane Hydrocarbon	0.0016989		
Non-methane organic gases	0.0018684		
Non-methane organic gases plus Nitrogen Oxides	999.999		
Optional Carbon-Related Exhaust Emissions	999.99		
Particulate Matter	0.001558		
Total Hydrocarbon	0.0055607		
Manufacturer Test Comments	EDV E10 Charge Depleting, Drive Mode Default from Full Charge		

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Test #	TMBX10090952	Test Procedure	84 - Charge Depleting Highway
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	05/02/2025	Fuel	N/A
Fuel Batch ID	U26R04	Fuel Calibration Number	1
Vehicle Class	N/A	DF Type	EPA Assigned
Verify Test Lab ID	3953 Research Park Drive		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4097	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
PHEV/EV Charge Depleting Test Information			
Recharge Event Voltage	240	Recharge Event Energy (kiloWatt-hours)	24.5955
Charge Depleting Range (Calculated miles)	71.82	Charge Depleting Range (Actual miles)	62.836
Charge Depleting Range Highway (Calculated miles)	--	Derived 5-Cycle Coefficient Model Year	2017
All Electric Range Unadjusted (miles)	62.276	Equivalent All Electric Range (miles)	61.753
Number of Charge Depleting Bags/Phases Conducted	10	Transition Bag/Phase Number	7
Charge Depleting Bag/Phase #1			

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
	Test Result/Emission Name		Unrounded Test Result
	Actual Distance Driven (miles)		10.266
	Average System Voltage		423.72
	CH4 - Methane		0
	Carbon Monoxide		0
	Carbon dioxide		0
	Carbon-Related Exhaust Emissions		999.99
	Drive Trace Absolute Speed Change Rating		3.816
	Drive Trace Energy Economy Rating		-0.373
	Drive Trace Inertia Work Ratio Rating		4.642
	Integrated Amp-hours		8.7701
	Integrated DC KW-HRS		3.7161
	Manufacturer Fuel Economy		0
	Nitrogen Oxide		0
	Nitrous Oxide		0
	Non-methane Hydrocarbon		0
	Non-methane organic gases		0
	Non-methane organic gases plus Nitrogen Oxides		999.999
	Optional Carbon-Related Exhaust Emissions		999.99
	Total Hydrocarbon		0

Charge Depleting Bag/Phase #2

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
	Test Result/Emission Name	Unrounded Test Result	
	Actual Distance Driven (miles)	10.271	
	Average System Voltage	411.18	
	CH4 - Methane	0	
	Carbon Monoxide	0	
	Carbon dioxide	0	
	Carbon-Related Exhaust Emissions	999.99	
	Drive Trace Absolute Speed Change Rating	4.716	
	Drive Trace Energy Economy Rating	-0.44	
	Drive Trace Inertia Work Ratio Rating	5.942	
	Integrated Amp-hours	17.3132	
	Integrated DC KW-HRS	7.2288	
	Manufacturer Fuel Economy	0	
	Nitrogen Oxide	0	
	Nitrous Oxide	0	
	Non-methane Hydrocarbon	0	
	Non-methane organic gases	0	
	Non-methane organic gases plus Nitrogen Oxides	999.999	
	Optional Carbon-Related Exhaust Emissions	999.99	
	Total Hydrocarbon	0	

Charge Depleting Bag/Phase #3

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Test Result/Emission Name	Unrounded Test Result		
Actual Distance Driven (miles)	10.261		
Average System Voltage	399.33		
CH4 - Methane	0		
Carbon Monoxide	0		
Carbon dioxide	0		
Carbon-Related Exhaust Emissions	999.99		
Drive Trace Absolute Speed Change Rating	4.774		
Drive Trace Energy Economy Rating	-0.615		
Drive Trace Inertia Work Ratio Rating	6.009		
Integrated Amp-hours	26.0335		
Integrated DC KW-HRS	10.7111		
Manufacturer Fuel Economy	0		
Nitrogen Oxide	0		
Nitrous Oxide	0		
Non-methane Hydrocarbon	0		
Non-methane organic gases	0		
Non-methane organic gases plus Nitrogen Oxides	999.999		
Optional Carbon-Related Exhaust Emissions	999.99		
Total Hydrocarbon	0		

Charge Depleting Bag/Phase #4

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP																																								
	<table border="1"> <thead> <tr> <th data-bbox="522 159 810 186">Test Result/Emission Name</th> <th data-bbox="1310 159 1551 186">Unrounded Test Result</th> </tr> </thead> <tbody> <tr> <td data-bbox="512 196 821 224">Actual Distance Driven (miles)</td> <td data-bbox="1394 196 1467 224">10.263</td> </tr> <tr> <td data-bbox="543 232 789 259">Average System Voltage</td> <td data-bbox="1394 232 1467 259">390.45</td> </tr> <tr> <td data-bbox="590 267 743 295">CH4 - Methane</td> <td data-bbox="1423 267 1438 295">0</td> </tr> <tr> <td data-bbox="575 303 758 331">Carbon Monoxide</td> <td data-bbox="1423 303 1438 331">0</td> </tr> <tr> <td data-bbox="590 339 743 367">Carbon dioxide</td> <td data-bbox="1423 339 1438 367">0</td> </tr> <tr> <td data-bbox="495 375 852 402">Carbon-Related Exhaust Emissions</td> <td data-bbox="1394 375 1467 402">999.99</td> </tr> <tr> <td data-bbox="453 410 894 438">Drive Trace Absolute Speed Change Rating</td> <td data-bbox="1394 410 1467 438">6.734</td> </tr> <tr> <td data-bbox="485 446 863 474">Drive Trace Energy Economy Rating</td> <td data-bbox="1394 446 1467 474">-0.335</td> </tr> <tr> <td data-bbox="478 482 869 509">Drive Trace Inertia Work Ratio Rating</td> <td data-bbox="1394 482 1467 509">8.561</td> </tr> <tr> <td data-bbox="558 518 789 545">Integrated Amp-hours</td> <td data-bbox="1394 518 1478 545">34.9256</td> </tr> <tr> <td data-bbox="548 553 800 581">Integrated DC KW-HRS</td> <td data-bbox="1394 553 1478 581">14.1831</td> </tr> <tr> <td data-bbox="527 589 821 617">Manufacturer Fuel Economy</td> <td data-bbox="1423 589 1438 617">0</td> </tr> <tr> <td data-bbox="590 625 743 652">Nitrogen Oxide</td> <td data-bbox="1423 625 1438 652">0</td> </tr> <tr> <td data-bbox="596 660 737 688">Nitrous Oxide</td> <td data-bbox="1423 660 1438 688">0</td> </tr> <tr> <td data-bbox="533 696 806 724">Non-methane Hydrocarbon</td> <td data-bbox="1423 696 1438 724">0</td> </tr> <tr> <td data-bbox="533 732 806 760">Non-methane organic gases</td> <td data-bbox="1423 732 1438 760">0</td> </tr> <tr> <td data-bbox="428 768 911 795">Non-methane organic gases plus Nitrogen Oxides</td> <td data-bbox="1394 768 1478 795">999.999</td> </tr> <tr> <td data-bbox="453 803 886 831">Optional Carbon-Related Exhaust Emissions</td> <td data-bbox="1394 803 1478 831">999.99</td> </tr> <tr> <td data-bbox="575 839 764 867">Total Hydrocarbon</td> <td data-bbox="1423 839 1438 867">0</td> </tr> </tbody> </table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	10.263	Average System Voltage	390.45	CH4 - Methane	0	Carbon Monoxide	0	Carbon dioxide	0	Carbon-Related Exhaust Emissions	999.99	Drive Trace Absolute Speed Change Rating	6.734	Drive Trace Energy Economy Rating	-0.335	Drive Trace Inertia Work Ratio Rating	8.561	Integrated Amp-hours	34.9256	Integrated DC KW-HRS	14.1831	Manufacturer Fuel Economy	0	Nitrogen Oxide	0	Nitrous Oxide	0	Non-methane Hydrocarbon	0	Non-methane organic gases	0	Non-methane organic gases plus Nitrogen Oxides	999.999	Optional Carbon-Related Exhaust Emissions	999.99	Total Hydrocarbon	0	
Test Result/Emission Name	Unrounded Test Result																																										
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Manufacturer Fuel Economy	0																																										
Nitrogen Oxide	0																																										
Nitrous Oxide	0																																										
Non-methane Hydrocarbon	0																																										
Non-methane organic gases	0																																										
Non-methane organic gases plus Nitrogen Oxides	999.999																																										
Optional Carbon-Related Exhaust Emissions	999.99																																										
Total Hydrocarbon	0																																										

Charge Depleting Bag/Phase #5

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP																																								
	<table border="1"> <thead> <tr> <th data-bbox="522 164 806 188">Test Result/Emission Name</th> <th data-bbox="1310 164 1551 188">Unrounded Test Result</th> </tr> </thead> <tbody> <tr> <td data-bbox="512 199 816 224">Actual Distance Driven (miles)</td> <td data-bbox="1394 199 1467 224">10.275</td> </tr> <tr> <td data-bbox="543 235 785 259">Average System Voltage</td> <td data-bbox="1394 235 1467 259">384.77</td> </tr> <tr> <td data-bbox="590 271 739 295">CH4 - Methane</td> <td data-bbox="1423 271 1438 295">0</td> </tr> <tr> <td data-bbox="575 306 753 331">Carbon Monoxide</td> <td data-bbox="1423 306 1438 331">0</td> </tr> <tr> <td data-bbox="590 342 739 367">Carbon dioxide</td> <td data-bbox="1423 342 1438 367">0</td> </tr> <tr> <td data-bbox="495 378 848 402">Carbon-Related Exhaust Emissions</td> <td data-bbox="1394 378 1467 402">999.99</td> </tr> <tr> <td data-bbox="453 414 890 438">Drive Trace Absolute Speed Change Rating</td> <td data-bbox="1394 414 1467 438">4.487</td> </tr> <tr> <td data-bbox="485 449 858 474">Drive Trace Energy Economy Rating</td> <td data-bbox="1394 449 1467 474">-0.622</td> </tr> <tr> <td data-bbox="478 487 865 511">Drive Trace Inertia Work Ratio Rating</td> <td data-bbox="1394 487 1467 511">6.008</td> </tr> <tr> <td data-bbox="558 522 785 547">Integrated Amp-hours</td> <td data-bbox="1394 522 1472 547">43.9351</td> </tr> <tr> <td data-bbox="548 558 795 583">Integrated DC KW-HRS</td> <td data-bbox="1394 558 1472 583">17.6497</td> </tr> <tr> <td data-bbox="527 594 816 618">Manufacturer Fuel Economy</td> <td data-bbox="1423 594 1438 618">0</td> </tr> <tr> <td data-bbox="590 630 753 654">Nitrogen Oxide</td> <td data-bbox="1423 630 1438 654">0</td> </tr> <tr> <td data-bbox="596 665 747 690">Nitrous Oxide</td> <td data-bbox="1423 665 1438 690">0</td> </tr> <tr> <td data-bbox="533 701 802 725">Non-methane Hydrocarbon</td> <td data-bbox="1423 701 1438 725">0</td> </tr> <tr> <td data-bbox="533 737 802 761">Non-methane organic gases</td> <td data-bbox="1423 737 1438 761">0</td> </tr> <tr> <td data-bbox="428 773 907 797">Non-methane organic gases plus Nitrogen Oxides</td> <td data-bbox="1394 773 1472 797">999.999</td> </tr> <tr> <td data-bbox="453 808 882 833">Optional Carbon-Related Exhaust Emissions</td> <td data-bbox="1394 808 1467 833">999.99</td> </tr> <tr> <td data-bbox="575 844 760 868">Total Hydrocarbon</td> <td data-bbox="1423 844 1438 868">0</td> </tr> </tbody> </table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	10.275	Average System Voltage	384.77	CH4 - Methane	0	Carbon Monoxide	0	Carbon dioxide	0	Carbon-Related Exhaust Emissions	999.99	Drive Trace Absolute Speed Change Rating	4.487	Drive Trace Energy Economy Rating	-0.622	Drive Trace Inertia Work Ratio Rating	6.008	Integrated Amp-hours	43.9351	Integrated DC KW-HRS	17.6497	Manufacturer Fuel Economy	0	Nitrogen Oxide	0	Nitrous Oxide	0	Non-methane Hydrocarbon	0	Non-methane organic gases	0	Non-methane organic gases plus Nitrogen Oxides	999.999	Optional Carbon-Related Exhaust Emissions	999.99	Total Hydrocarbon	0	
Test Result/Emission Name	Unrounded Test Result																																										
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Nitrogen Oxide	0																																										
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Non-methane Hydrocarbon	0																																										
Non-methane organic gases	0																																										
Non-methane organic gases plus Nitrogen Oxides	999.999																																										
Optional Carbon-Related Exhaust Emissions	999.99																																										
Total Hydrocarbon	0																																										

Charge Depleting Bag/Phase #6

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
	Test Result/Emission Name		Unrounded Test Result
	Actual Distance Driven (miles)		10.269
	Average System Voltage		379.05
	CH4 - Methane		0
	Carbon Monoxide		0
	Carbon dioxide		0
	Carbon-Related Exhaust Emissions		999.99
	Drive Trace Absolute Speed Change Rating		5.813
	Drive Trace Energy Economy Rating		0.055
	Drive Trace Inertia Work Ratio Rating		7.296
	Integrated Amp-hours		53.1023
	Integrated DC KW-HRS		21.1245
	Manufacturer Fuel Economy		0
	Nitrogen Oxide		0
	Nitrous Oxide		0
	Non-methane Hydrocarbon		0
	Non-methane organic gases		0
	Non-methane organic gases plus Nitrogen Oxides		999.999
	Optional Carbon-Related Exhaust Emissions		999.99
	Total Hydrocarbon		0

Charge Depleting Bag/Phase #7

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
	Test Result/Emission Name	Unrounded Test Result	
	Actual Distance Driven (miles)	10.261	
	Average System Voltage	380.36	
	CH4 - Methane	0.0012091	
	Carbon Monoxide	0.0663396	
	Carbon dioxide	251.095	
	Carbon-Related Exhaust Emissions	999.99	
	Drive Trace Absolute Speed Change Rating	6.737	
	Drive Trace Energy Economy Rating	0.321	
	Drive Trace Inertia Work Ratio Rating	8.926	
	Integrated Amp-hours	54.203	
	Integrated DC KW-HRS	21.5432	
	Manufacturer Fuel Economy	34.35	
	Nitrogen Oxide	0.0030544	
	Nitrous Oxide	0.0003122	
	Non-methane Hydrocarbon	0.0102048	
	Non-methane organic gases	0.010511	
	Non-methane organic gases plus Nitrogen Oxides	999.999	
	Optional Carbon-Related Exhaust Emissions	999.99	
	Total Hydrocarbon	0.011324	

Charge Depleting Bag/Phase #8

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
	Test Result/Emission Name		Unrounded Test Result
	Actual Distance Driven (miles)		10.264
	Average System Voltage		381.28
	CH4 - Methane		0.0002936
	Carbon Monoxide		0.0110685
	Carbon dioxide		257.353
	Carbon-Related Exhaust Emissions		999.99
	Drive Trace Absolute Speed Change Rating		6.669
	Drive Trace Energy Economy Rating		0.451
	Drive Trace Inertia Work Ratio Rating		8.319
	Integrated Amp-hours		54.2307
	Integrated DC KW-HRS		21.5538
	Manufacturer Fuel Economy		33.53
	Nitrogen Oxide		0.0001055
	Nitrous Oxide		0.0000284
	Non-methane Hydrocarbon		0
	Non-methane organic gases		0
	Non-methane organic gases plus Nitrogen Oxides		999.999
	Optional Carbon-Related Exhaust Emissions		999.99
	Total Hydrocarbon		0

Charge Depleting Bag/Phase #9

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
	Test Result/Emission Name	Unrounded Test Result	
	Actual Distance Driven (miles)	10.257	
	Average System Voltage	381.52	
	CH4 - Methane	0.0002511	
	Carbon Monoxide	0.021969	
	Carbon dioxide	255.073	
	Carbon-Related Exhaust Emissions	999.99	
	Drive Trace Absolute Speed Change Rating	5.873	
	Drive Trace Energy Economy Rating	0.008	
	Drive Trace Inertia Work Ratio Rating	7.517	
	Integrated Amp-hours	54.2084	
	Integrated DC KW-HRS	21.5453	
	Manufacturer Fuel Economy	33.82	
	Nitrogen Oxide	0.0005913	
	Nitrous Oxide	0.0000861	
	Non-methane Hydrocarbon	0	
	Non-methane organic gases	0	
	Non-methane organic gases plus Nitrogen Oxides	999.999	
	Optional Carbon-Related Exhaust Emissions	999.99	
	Total Hydrocarbon	0	

Charge Depleting Bag/Phase #10

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
	Test Result/Emission Name	Unrounded Test Result	
	Actual Distance Driven (miles)	10.266	
	Average System Voltage	381.56	
	CH4 - Methane	0.0002561	
	Carbon Monoxide	0.0095086	
	Carbon dioxide	256.8886	
	Carbon-Related Exhaust Emissions	999.99	
	Drive Trace Absolute Speed Change Rating	6.302	
	Drive Trace Energy Economy Rating	0.377	
	Drive Trace Inertia Work Ratio Rating	7.919	
	Integrated Amp-hours	54.1492	
	Integrated DC KW-HRS	21.5227	
	Manufacturer Fuel Economy	33.59	
	Nitrogen Oxide	0.001702	
	Nitrous Oxide	0.0000065	
	Non-methane Hydrocarbon	0	
	Non-methane organic gases	0	
	Non-methane organic gases plus Nitrogen Oxides	999.999	
	Optional Carbon-Related Exhaust Emissions	999.99	
	Total Hydrocarbon	0	

Manufacturer Test Comments

EDV E10 Charge Depleting, Drive Mode Default from Full Charge

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP									
Emission Data Vehicle Information												
Vehicle ID / Configuration	V223E30DETC-Z2304 / 0	Manufacturer Vehicle Configuration Number	0									
Original Test Group Name	PMBXV03.0HY1	Original Evaporative/Refueling Family	PMBXR0170LNA									
Original Test Vehicle Model Year	2023											
Vehicle Model												
Represented Test Vehicle Make	Mercedes-Benz	Represented Test Vehicle Model	S 580e 4MATIC									
Leak Family Details												
Leak Family Identifier	--	Leak Family Name	--									
Drive Sources and Fuel System Details												
<table border="1"> <thead> <tr> <th>Drive Source and Fuel#</th> <th>Drive Source</th> <th>Fuel</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Electric Motor</td> <td>Electricity</td> </tr> <tr> <td>2</td> <td>Combustion Engine</td> <td>Gasoline</td> </tr> </tbody> </table>				Drive Source and Fuel#	Drive Source	Fuel	1	Electric Motor	Electricity	2	Combustion Engine	Gasoline
Drive Source and Fuel#	Drive Source	Fuel										
1	Electric Motor	Electricity										
2	Combustion Engine	Gasoline										
Hybrid Indicator	Yes											
Multiple Fuel Storage	--	Multiple Fuel Combustion	--									
Fuel Cell Indicator	No	Rechargeable Energy Storage System Indicator	Yes									
Rechargeable Energy Storage System	Battery(s)	Rechargeable Energy Storage System, if 'Other'	--									
Off-board charge Capable Indicator	Yes											
Odometer Correction -- Initial	74	Odometer Correction Factor	0.9798									
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor											
Odometer Correction Units	Miles											
Engine Code	M256-30DETC-PH	Rated Horsepower	362									
Displacement (liters)	2.999											
Air Aspiration Method	Turbocharged	Air Aspiration Method, if 'Other'										
Number of Air Aspiration Devices	1	Air Aspiration Device Configuration	Single									
Charge Air Cooler Type	Liquid	Drive Mode While Testing	All Wheel Drive									
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)									
Curb Weight (lbs)	5813	Equivalent Test Weight (pounds)	6000									
GVWR (lbs)	6768	N/V Ratio	19.7									
Axle Ratio	2.65											
Transmission Type	Automatic	# of Transmission Gears	9									
Transmission Lockup	Yes	Creeper Gear	No									

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
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Dynamometer Coefficients:

Coefficient Category	Target Coefficients			Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	
City/Highway/Evap	68.79	0.0362	0.01891	16.245	0.05583	0.016489	15.7
US06	68.79	0.0362	0.01891	16.245	0.05583	0.016489	N/A

Emission Control Device Comments Combustion Engine: 362hp; Electric Motor: 148hp
Manufacturer Test Vehicle Comments 255/45 R19 (front tires) + 285/40 R19 (rear tires); EDV Evap Plug-In Hybrid S-Class

Test #	PMBX10078679	Test Procedure	34 - Federal fuel 3-day evap
Exhaust Test # for this Evap Test	PMBX10078677	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	01/26/2023	Fuel	Gasoline
Fuel Batch ID	U24R01	Fuel Calibration Number	1
Vehicle Class	N/A	DF Type	EPA Assigned
Verify Test Lab ID	3953 Research Park Drive		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	4259	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	--	Road Speed Fan Usage	--

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.2314	--

Manufacturer Test Comments MY2023 (V223 M256 P2-110 PHEV) 3Day EVAP Test Result. Hot Soak: 0.074 g HC-Total / 0.080 g HC-Total-Equiv. Highest 24 hrs result: 0.1402 g HC-Total / 0.1514 g HC-Total-Equiv

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.2314	0.0067	0.238	0.3	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.2314	0.0067	0.238	0.3	Pass

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Test #	PMBX10080237	Test Procedure	23 - 2-day evap
Exhaust Test # for this Evap Test	PMBX10080070	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	02/07/2023	Fuel	Gasoline
Fuel Batch ID	U24R01	Fuel Calibration Number	1
Vehicle Class	N/A	DF Type	EPA Assigned
Verify Test Lab ID	3953 Research Park Drive		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	4279	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes	Road Speed Fan Usage	No
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)		

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.1814	--

Manufacturer Test Comments

MY2023 (V223 M256 P2-110 PHEV), NIRCOS, Hot Soak: 0.0216 g HC-Total-EQUIV

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.1814	0.003	0.184	0.3	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.1814	0.003	0.184	0.3	Pass

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Test #	PMBX10078553	Test Procedure	24 - Federal fuel refueling test (ORVR)
Exhaust Test # for this Evap Test	PMBX10078552	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	01/10/2023	Fuel	Gasoline
Fuel Batch ID	U23R10	Fuel Calibration Number	1
Vehicle Class	N/A	DF Type	EPA Assigned
Verify Test Lab ID	3953 Research Park Drive		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	4132	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
OMHCE (Organic material Hydrocarbon Equivalent)	0.0033	--

Manufacturer Test Comments Alternative ORVR Test Procedure for PHEV w/ non-integrated fuel system (NIRCOS)

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	OMHCE	0.003	0.005	0.01	0.2	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	OMHCE	0.003	0.005	0.01	0.2	Pass

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Test #	PMBX10078678	Test Procedure	32 - Federal Fuel Running Loss
Exhaust Test # for this Evap Test	PMBX10078677	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	01/26/2023	Fuel	Gasoline
Fuel Batch ID	U24R01	Fuel Calibration Number	1
Vehicle Class	N/A	DF Type	EPA Assigned
Verify Test Lab ID	3953 Research Park Drive		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	4242	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	--	Road Speed Fan Usage	--

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.00139	--

Manufacturer Test Comments

MY2023 (V223 M256 P2-110 PHEV) Running Loss Test. Tier 3 E10 fuel. 0.00129 g/mi HC

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.001	0	0	0.05	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.001	0	0	0.01	Pass

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Fuel Properties			
Fuel Batch ID	U26R04	Fuel Calibration Number	1
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	03/14/2025
Fuel Batch Calibration Effective Date	04/30/2025	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.749
Fuel Ethanol Volume Percent (%)	10	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17919
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.833	Weight Fraction CO2	--
Fuel Batch ID	U25C02	Fuel Calibration Number	1
Test Fuel Type	29 - Cold CO E10 Premium Gasoline (Tier 3)	Fuel Batch Calibration Date	04/11/2024
Fuel Batch Calibration Effective Date	05/17/2024	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.745
Fuel Ethanol Volume Percent (%)	9.8	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17795
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.827	Weight Fraction CO2	--
Fuel Batch ID	U26I00	Fuel Calibration Number	1
Test Fuel Type	61 - Tier 2 Cert Gasoline	Fuel Batch Calibration Date	04/09/2025
Fuel Batch Calibration Effective Date	05/16/2025	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.742
Fuel Ethanol Volume Percent (%)	--	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	18580
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.867	Weight Fraction CO2	--
Fuel Batch ID	U24R01	Fuel Calibration Number	1
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	11/28/2022
Fuel Batch Calibration Effective Date	01/09/2023	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.748
Fuel Ethanol Volume Percent (%)	9.9	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	18005
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.827	Weight Fraction CO2	--
Fuel Batch ID	U23R10	Fuel Calibration Number	1
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	10/14/2022
Fuel Batch Calibration Effective Date	10/27/2022	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.75
Fuel Ethanol Volume Percent (%)	9.6	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17928
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.829	Weight Fraction CO2	--
Fuel Batch ID	U26R02	Fuel Calibration Number	1
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	02/27/2025
Fuel Batch Calibration Effective Date	04/10/2025	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.748
Fuel Ethanol Volume Percent (%)	10	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17962
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.824	Weight Fraction CO2	--

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP						
Consolidated List of Standards									
Exhaust Standards									
Cert Region	California + CAA Section 177 states	Cert/In-Use Code	Both						
Vehicle Class	LDV/Passenger Car	Standard Level	California LEV-IV SULEV30						
Fuel	Gasoline	Test Procedure	Federal fuel 2-day exhaust (w/can load)						
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
120,000 miles	CREE	--	--	--	--	--	1.26	--	999
150,000 miles	CO	--	--	--	--	--	--	0.11	1.0
150,000 miles	NMOG	--	--	1.1	--	--	--	0.0034	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0058	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.0024	99.999
150,000 miles	PM	--	--	--	--	--	--	0	0.003
Cert Region				California + CAA Section 177 states	Cert/In-Use Code		Both		
Vehicle Class				LDV/Passenger Car	Standard Level		California LEV-IV SULEV30		
Fuel				Gasoline	Test Procedure		US06		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	0.11	9.6
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0034	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0058	0.036
150,000 miles	NOX	--	--	--	--	--	--	0.0024	99.999
150,000 miles	PM	--	--	--	--	--	--	0	0.006
Cert Region				California + CAA Section 177 states	Cert/In-Use Code		Both		
Vehicle Class				LDV/Passenger Car	Standard Level		California LEV-IV SULEV30		
Fuel				Gasoline	Test Procedure		SC03		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	0.11	1.0
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0034	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0058	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.0024	99.999

Certification Summary Information Report

Test Group		TMBXV03.0HY4			Evaporative/Refueling Family			TMBXR0160LNP		
Cert Region		Federal			Cert/In-Use Code			Both		
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 30		
Fuel		Gasoline			Test Procedure			Federal fuel 2-day exhaust (w/can load)		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std	
120,000 miles	CREE	--	--	--	--	--	1.26	--	999	
120,000 miles	METHANE	--	--	--	--	--	--	0.002	0.030	
120,000 miles	N2O	--	--	--	--	--	--	0.0007	0.010	
150,000 miles	CO	--	--	--	--	--	--	0.11	1.0	
150,000 miles	CO-COMP	--	--	--	--	--	--	--	4.2	
150,000 miles	NMOG	--	--	1.1	--	--	--	0.0034	99.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0058	0.030	
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	--	0.030	
150,000 miles	NOX	--	--	--	--	--	--	0.0024	99.999	
150,000 miles	PM	--	--	--	--	--	--	0	0.003	
Cert Region		Federal			Cert/In-Use Code			Both		
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 30		
Fuel		Gasoline			Test Procedure			HWFE		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std	
120,000 miles	CREE	--	--	--	--	--	1.26	--	999	
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0034	99.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0058	0.030	
150,000 miles	NOX	--	--	--	--	--	--	0.0024	99.999	
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Both		
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-IV SULEV30		
Fuel		Gasoline			Test Procedure			Cold CO		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std	
50,000 miles	CO	--	--	--	--	--	--	0.11	10.0	

Certification Summary Information Report

Test Group		TMBXV03.0HY4			Evaporative/Refueling Family			TMBXR0160LNP		
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Both		
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-IV SULEV30		
Fuel		Gasoline			Test Procedure			High-Power Cold-Start (HPCS)		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std	
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0034	99.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0058	0.150	
150,000 miles	NOX	--	--	--	--	--	--	0.0024	99.999	
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Both		
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-IV SULEV30		
Fuel		Gasoline			Test Procedure			HWFE		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std	
120,000 miles	CREE	--	--	--	--	--	1.26	--	999	
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0034	99.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0058	0.030	
150,000 miles	NOX	--	--	--	--	--	--	0.0024	99.999	
Cert Region		Federal			Cert/In-Use Code			Both		
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 30		
Fuel		Gasoline			Test Procedure			Cold CO		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std	
50,000 miles	CO	--	--	--	--	--	--	0.11	10.0	
120,000 miles	HC-NM	--	--	--	--	--	--	0.0031	0.100	
Cert Region		Federal			Cert/In-Use Code			Both		
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 30		
Fuel		Gasoline			Test Procedure			US06		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std	
150,000 miles	PM	--	--	--	--	--	--	0	0.006	

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Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP		
Evaporative/Refueling Standards					
Evaporative/Refueling Family	TMBXR0160LNP	Cert Region	California + CAA Section 177 states California LEV-IV Zero Evap (Option 2)		
Cert/In-Use Code	Both	Standard Level			
Test Procedure	Federal fuel refueling test (ORVR)				
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	OMHCE	--	0.20	0.005
Evaporative/Refueling Family					
Evaporative/Refueling Family	TMBXR0160LNP	Cert Region	California + CAA Section 177 states California LEV-IV Zero Evap (Option 2)		
Cert/In-Use Code	Both	Standard Level			
Test Procedure	Federal fuel 3-day evap				
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.300	0.0067
Evaporative/Refueling Family					
Evaporative/Refueling Family	TMBXR0160LNP	Cert Region	Federal Federal Tier 3 Evap		
Cert/In-Use Code	Both	Standard Level			
Test Procedure	Federal fuel refueling test (ORVR)				
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	OMHCE	--	0.20	0.005
Evaporative/Refueling Family					
Evaporative/Refueling Family	TMBXR0160LNP	Cert Region	Federal Federal Tier 3 Evap		
Cert/In-Use Code	Both	Standard Level			
Test Procedure	Federal Fuel Running Loss				
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.05	0
Evaporative/Refueling Family					
Evaporative/Refueling Family	TMBXR0160LNP	Cert Region	California + CAA Section 177 states California LEV-IV Zero Evap (Option 2)		
Cert/In-Use Code	Both	Standard Level			
Test Procedure	Federal Fuel Running Loss				
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.01	0

Certification Summary Information Report

Test Group		TMBXV03.0HY4		Evaporative/Refueling Family		TMBXR0160LNP					
Evaporative/Refueling Family		TMBXR0160LNP		Cert Region		Federal					
Cert/In-Use Code		Both		Standard Level		Federal Tier 3 Evap					
Test Procedure		Federal fuel 3-day evap									
Fuel		Useful Life		Emission Name		Rounded Result		Std		Add DF	
Gasoline		150,000 miles		HC-TOTAL-EQUIV		--		0.300		0.0067	
Evaporative/Refueling Family		TMBXR0160LNP		Cert Region		Federal					
Cert/In-Use Code		Both		Standard Level		Federal Tier 3 Evap					
Test Procedure		2-day evap									
Fuel		Useful Life		Emission Name		Rounded Result		Std		Add DF	
Gasoline		150,000 miles		HC-TOTAL-EQUIV		--		0.300		0.003	
Evaporative/Refueling Family		TMBXR0160LNP		Cert Region		California + CAA Section 177 states					
Cert/In-Use Code		Both		Standard Level		California LEV-IV Zero Evap (Option 2)					
Test Procedure		2-day evap									
Fuel		Useful Life		Emission Name		Rounded Result		Std		Add DF	
Gasoline		150,000 miles		HC-TOTAL-EQUIV		--		0.300		0.003	

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
Glossary			
Useful Life			
4	4,000 miles	120	120,000 miles
50	50,000 miles	150	150,000 miles
100	100,000 miles		
Emission Name			
HC-TOTAL	Total Hydrocarbon	AS-VOLT	Average System Voltage
CO	Carbon Monoxide	CO2 BAG 1	Bag 1 Carbon Dioxide
CO2	Carbon dioxide	CO2 BAG 2	Bag 2 Carbon Dioxide
CREE	Carbon-Related Exhaust Emissions	CO2 BAG 3	Bag 3 Carbon Dioxide
OPT-CREE	Optional Carbon-Related Exhaust Emissions	CO2 BAG 4	Bag 4 Carbon Dioxide
NOX	Nitrogen Oxide	NMOG+NOX	Non-methane organic gases plus Nitrogen Oxides
PM	Particulate Matter	NMOG+NOX-COMP	SFTP Composite Non-methane Organic Gases + Nitrogen Oxides
PM-COMP	SFTP Composite Particulate Matter	DT-IWRR	Drive Trace Inertia Work Ratio Rating
HC-NM	Non-methane Hydrocarbon	DT-ASCR	Drive Trace Absolute Speed Change Rating
OMHCE	Organic material Hydrocarbon Equivalent	DT-EER	Drive Trace Energy Economy Rating
OMNMHCE	Organic material non-methane HC equivalent	COMB-CREE	Combined Carbon-Related Exhaust Emissions
NMOG	Non-methane organic gases	COMB-OPT-CREE	Combined Optional Carbon-Related Exhaust Emissions
HCHO	Formaldehyde	HC-TOTAL-EQUIV	Total Hydrocarbon equivalent - Evap only
H3C2HO	Acetaldehyde	METHANE-COMB	Combined CH4 for HD 2b/3 vehicles only
HC-NM+NOX	SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03	N2O-COMB	Combined Nitrous Oxide for HD 2b/3 vehicles only
HC-NM+NOX-COMP	SFTP Composite Non-methane Hydrocarbon + Nitrogen Oxides	LEAK-DIA	Effective Leak Diameter (inches)
CO-COMP	SFTP Composite Carbon Monoxide	LEAK-GAS CAP	Gas Cap Leakage (cc/min)
ETHANOL	C2H5OH - Ethanol	CO2-COMB	Combined Carbon Dioxide for HD 2b/3 Vehicles Only
FE BAG 1	Bag 1 Fuel Economy	KW-HRS	Integrated DC KW-HRS
FE BAG 2	Bag 2 Fuel Economy	CH4 BAG 1	Bag 1 Methane
FE BAG 3	Bag 3 Fuel Economy	CH4 BAG 2	Bag 2 Methane
FE BAG 4	Bag 4 Fuel Economy	CH4 BAG 3	Bag 3 Methane
MFR FE	Manufacturer Fuel Economy	CH4 BAG 4	Bag 4 Methane
HC	Hydrocarbon for Running Loss and ORVR	CO BAG 1	Bag 1 Carbon Monoxide
METHANE	CH4 - Methane	CO BAG 2	Bag 2 Carbon Monoxide
METHANOL	CH3OH - Methanol	CO BAG 3	Bag 3 Carbon Monoxide
N2O	Nitrous Oxide	CO BAG 4	Bag 4 Carbon Monoxide
SPITBACK	Spitback Hydrocarbon in grams	NMOG BAG 1	Bag 1 Non-methane organic gases
AMP-HRS	Integrated Amp-hours	NMOG BAG 2	Bag 2 Non-methane organic gases
START-SOC	System Start State of Charge Watt-hours	NMOG BAG 3	Bag 3 Non-methane organic gases
END-SOC	System End State of Charge Watt-hours	NMOG BAG 4	Bag 4 Non-methane organic gases
ACT-DISTANCE	Actual Distance Driven (miles)		
Certification Region			

Certification Summary Information Report

Test Group	TMBXV03.0HY4	Evaporative/Refueling Family	TMBXR0160LNP
CA	California + CAA Section 177 states	FA	Federal
Exhaust Emission Standard Level			
B1	Federal Tier 2 Bin 1	T3B160	Federal Tier 3 Bin 160
B2	Federal Tier 2 Bin 2	T3B125	Federal Tier 3 Bin 125
B3	Federal Tier 2 Bin 3	T3B110	Federal Tier 3 Transitional Bin 110
B4	Federal Tier 2 Bin 4	T3B85	Federal Tier 3 Transitional Bin 85
B5	Federal Tier 2 Bin 5	T3SULEV30	Federal Tier 3 Transitional LEV-II SULEV30 Carryover
B6	Federal Tier 2 Bin 6	T3B70	Federal Tier 3 Bin 70
B7	Federal Tier 2 Bin 7	T3B50	Federal Tier 3 Bin 50
B8	Federal Tier 2 Bin 8	T3B30	Federal Tier 3 Bin 30
B9	Federal Tier 2 Bin 9	T3B20	Federal Tier 3 Bin 20
B10	Federal Tier 2 Bin 10	T3B0	Federal Tier 3 Bin 0
B11	Federal Tier 2 Bin 11	HDV2B395	Federal Tier 3 HD Class 2b Transitional Bin 395
HDV1	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)	HDV2B340	Federal Tier 3 HD Class 2b Transitional Bin 340
HDV2	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)	HDV2B250	Federal Tier 3 HD Class 2b Bin 250
L2	California LEV-II LEV	HDV2B200	Federal Tier 3 HD Class 2b Bin 200
L2OP	California LEV-II LEV Optional	HDV2B170	Federal Tier 3 HD Class 2b Bin 170
U2	California LEV-II ULEV	HDV2B150	Federal Tier 3 HD Class 2b Bin 150
S2	California LEV-II SULEV	HDV2B0	Federal Tier 3 HD Class 2b Bin 0
ZEV	California ZEV	HDV3B630	Federal Tier 3 HD Class 3 Transitional Bin 630
OT	Other	HDV3B570	Federal Tier 3 HD Class 3 Transitional Bin 570
T1	Federal Tier 1	HDV3B400	Federal Tier 3 HD Class 3 Bin 400
PZEV	California PZEV	HDV3B270	Federal Tier 3 HD Class 3 Bin 270
L2LEV160	California LEV-II LEV160	HDV3B230	Federal Tier 3 HD Class 3 Bin 230
L2ULEV125	California LEV-II ULEV125	HDV3B200	Federal Tier 3 HD Class 3 Bin 200
L2SULEV30	California LEV-II SULEV30	HDV3B0	Federal Tier 3 HD Class 3 Bin 0
L2LEV395	California LEV-II LEV395	L4SULEV100	California LEV-IV SULEV100
L2ULEV340	California LEV-II ULEV340	L4SULEV125	California LEV-IV SULEV125
L2LEV630	California LEV-II LEV630	L4SULEV15	California LEV-IV SULEV15
L2ULEV570	California LEV-II ULEV570	L4SULEV150	California LEV-IV SULEV150
L3LEV160	California LEV-III LEV160	L4SULEV170	California LEV-IV SULEV170
L3ULEV125	California LEV-III ULEV125	L4SULEV175	California LEV-IV SULEV175
L3ULEV70	California LEV-III ULEV70	L4SULEV20	California LEV-IV SULEV20
L3ULEV50	California LEV-III ULEV50	L4SULEV200	California LEV-IV SULEV200
L3SULEV30	California LEV-III SULEV30	L4SULEV230	California LEV-IV SULEV230
L3SULEV20	California LEV-III SULEV20	L4SULEV25	California LEV-IV SULEV25
L3LEV395	California LEV-III LEV395	L4SULEV30	California LEV-IV SULEV30
L3ULEV340	California LEV-III ULEV340	L4SULEV75	California LEV-IV SULEV75
L3ULEV250	California LEV-III ULEV250	L4SULEV85	California LEV-IV SULEV85
L3ULEV200	California LEV-III ULEV200	L4ULEV125	California LEV-IV ULEV125

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Test Group		TMBXV03.0HY4	Evaporative/Refueling Family		TMBXR0160LNP
L3SULEV170	California LEV-III SULEV170		L4ULEV200	California LEV-IV ULEV200	
L3SULEV150	California LEV-III SULEV150		L4ULEV250	California LEV-IV ULEV250	
L3LEV630	California LEV-III LEV630		L4ULEV270	California LEV-IV ULEV270	
L3ULEV570	California LEV-III ULEV570		L4ULEV40	California LEV-IV ULEV40	
L3ULEV400	California LEV-III ULEV400		L4ULEV400	California LEV-IV ULEV400	
L3ULEV270	California LEV-III ULEV270		L4ULEV50	California LEV-IV ULEV50	
L3SULEV230	California LEV-III SULEV230		L4ULEV60	California LEV-IV ULEV60	
L3SULEV200	California LEV-III SULEV200		L4ULEV70	California LEV-IV ULEV70	
Transmission Type Code					
AMS	Automated Manual- Selectable (e.g. Automated Manual with paddles)		M	Manual	
A	Automatic		OT	Other	
AM	Automated Manual		SA	Semi-Automatic	
CVT	Continuously Variable		SCV	Selectable Continuously Variable (e.g. CVT with paddles)	
Drive System Code					
4	4-Wheel Drive		P	Part-time 4-Wheel Drive	
F	2-Wheel Drive, Front		A	All Wheel Drive	
R	2-Wheel Drive, Rear				
Additional Terms and Acronyms					
AFC	Alternative Fuel Converter		ICI	Independent Commercial Importer	
CSI	Certificate Summary Information		ORVR	Onboard Refueling Vapor Recovery	
DF	Deterioration Factor		SIL	Shift Indicator Light	
Evap	Evaporation, Evaporative		Trans	Transmission	